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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,168	09/18/2001	Heiko Maas	213301US0PCT	8981
22850	7590	04/21/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			PRICE, ELVIS O	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/926,168	MAAS ET AL.	
	Examiner	Art Unit	
	Elvis O. Price	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-13 and 19-31 is/are pending in the application.
- 4a) Of the above claim(s) 23-26 and 29-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-13, 19-22, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 2, 4-13 and 19-31 are pending in the application. Claims 23-26 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions. Newly submitted claims 29-31 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: New claims 29-30 are drawn to (1) an alkoxylation product and claim 31 is drawn to a method for the preparation of (2) a surfactant. The previously prosecuted claims 1-13 and 19-22 are drawn to (3) a process for preparing primary alcohols comprising, inter alia, dimerizing an olefin mixture. These three separate inventions are distinct each from the other because there is no patentable co-action between the three separate inventions and a reference anticipating or rendering obvious one invention will not necessarily render another invention obvious. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 29-31 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. Applicants' arguments filed 1/12/04 were found convincing to overcome the 35 USC 103(a) rejection issued 8/12/03. However, a new 35 USC 103(a) rejection has been issued.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 12 is rejected under 35 U.S.C. 102(a) as being anticipated by Singleton {US Pat. 5,780,694}.

Singleton discloses a surfactant alcohol, which is prepared by dimerizing an olefin mixture (see Examples 1-3 and Table 1).

Claims 5-11, 19-21 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Threlkel {US Pat. 4,959,491}.

Threlkel discloses an olefin mixture (mixture 1) which is prepared by dimerization of an olefin mixture (mixture 2) comprised of 75% by weight of linear hexene isomers and overall at least 60% by weight of hexane isomers (see Col. 3, lines 3-23; Example 1 and Table 1). The presently claimed degree of branching or the ratio of aliphatic to olefinic hydrogen atoms of the branched components or the amount of branched and/or unbranched components contained in the presently claimed olefin mixture product would be all inherent attributes of the olefin mixture (mixture 1) product disclosed by Threlkel.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 13, 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelbrecht et al. {US Pat. 3,315,009} in view of Singleton {US Pat. 5,780,694}.

Applicants claim, in brief, a process comprising dimerizing an olefin mixture to form a dimerized product, and derivatizing the dimerized product to form a mixture of primary alcohols, wherein the olefin mixture comprises from 30 to 80% by weight of linear hexane isomers and at least 60% by weight of hexane isomers overall, and wherein the dimerization is carried out with heterogeneous catalyst.

Engelbrecht et al. teach a process comprising dimerizing an olefin mixture to form a dimerized product, wherein the olefin mixture comprises at least 60% by weight of hexane isomers overall, and wherein the dimerization is carried out with heterogeneous catalyst (see Example 1). The difference between the presently claimed invention and what is taught by the Engelbrecht et al. reference is that the Engelbrecht et al. reference does not teach derivatizing the dimerized product to form a mixture of primary alcohols.

Singleton teaches primary alcohol compositions, obtained by dimerizing an olefin mixture followed by subsequent conversion to the primary alcohol, that are converted to anionic or nonionic surfactants, which are either sulfated or oxyalkylated (the alkoxylation product) (see Col. 3, lines 37-45; Col. 11, lines 14-21 and Col. 12, lines 6-60).

It would have been *prima facie* obvious to one having ordinary skill in the art, in view of the Engelbrecht et al. and Singleton references, to prepare surfactant alcohols

as presently claimed because Engelbrecht et al. teach the dimerization of an olefin mixture comprised of at least 60% by weight of hexane isomers and Singleton teaches that primary alcohol compositions can be obtained by dimerizing an olefin mixture followed by subsequent conversion to the primary alcohol, which can be converted to anionic or nonionic surfactants by either sulfating or alkoxyating the said primary alcohol composition.

One having ordinary skill in the art, in view of the teachings of the Engelbrecht et al. and Singleton references, would have been motivated to convert olefin mixtures taught by Engelbrecht et al. to a primary alcohol composition before alkoxyating the alcohol composition so as to prepare nonionic surfactants. One having ordinary skill in the art, desiring to prepare biodegradable surfactants, would have been motivated to use the Engelbrecht et al. olefin mixture because the olefin mixture taught by Engelbrecht et al. is recognized in the art as a biodegradable entity (Col. 1, lines 1-34 and Col. 6, lines 62-69). Therefore, the presently claimed invention would have been obvious to one having ordinary skill in the art.

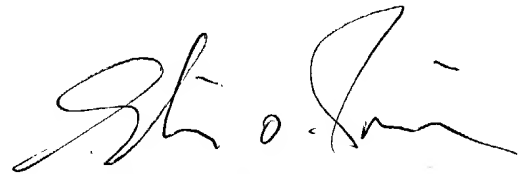
Response to Arguments

Applicants' arguments filed 1/12/04 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvis O. Price whose telephone number is 703 605-1204. The examiner can normally be reached on 8:30 am to 5:00 pm; Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 703 308-4532. The fax phone numbers for the organization where this application or proceeding is assigned is 703 308-4556 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1235.

A handwritten signature in black ink, appearing to read 'Elvis O. Price', with a stylized, cursive script.

Elvis O. Price
Art Unit 1621

April 19, 2004